Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): A multiparameter method of screening for the diagnosis, the prevention or the treatment of atherosclerosis-related coronary heart disease (CHD) or stroke comprising;

defining the disease as atherosclerosis-related CHD or stroke;

defining the normal as free from said disease;

defining the following parameters as atherosclerotic parameters consisting of c = the Low-density lipoprotein (LDL) concentration parameter in mg/dL or c = the C-reactive protein (CRP) concentration parameter in mg/L, p = the blood systolic pressure parameter in mmHg or p = the blood diastolic pressure parameter in mmHg, f = the heart rate parameter in s^{-1}, a = the radius parameter along arterial radius in cm, T = the temperature parameter of

blood plasma in °C, α = the angle parameter between gravity and the mean velocity of blood fluid in arterial vessels in degree and z = the axial position parameter of diffusion flux along the inner wall in the axial direction of arterial vessels in cm, called the diffusion length;

an individual having the measured values of said atherosclerotic parameters of the following expressions:

$$J = Ac^{\frac{11}{9}}(v^3 D^{16})^{\frac{1}{27}}\left(\frac{g\cos\alpha + fu}{z}\right)^{\frac{2}{9}} \quad (1.1)$$

or

$$J = Bc^{\frac{11}{9}} p^{\frac{1}{3}} T^{\frac{16}{27}} a^{\frac{2}{3}} f^{\frac{2}{9}} z^{-\frac{2}{9}} \quad (1.2)$$

and

$$J = E\, c^{\frac{11}{9}} D^{\frac{16}{27}} z^{-\frac{2}{9}} (\cos\alpha)^{\frac{2}{9}} \quad (1.3)$$

wherein J = the mass transfer flux in 10^{-5} g/(cm^{2}s), A, B and E = the constants of conversion factors, v = the eddy velocity of blood fluid in arterial vessels in cm/s, u = the mean velocity of the blood fluid in cm/s, D = the diffusion coefficient in cm^2/s, and g = the gravitational acceleration in cm/s^2;

the individual having the normal values of said

atherosclerotic parameters;

determining the disease risks yielded by the differences between said measured values and said normal values of said atherosclerotic parameters;

adding all said disease risks together yields a total risk of said disease;

determining a disease risk level containing said total risk of said disease;

selecting an atherosclerotic risk factor related to an atherosclerotic parameter that is the greatest contribution to said total risk of said disease so as to result in said risk factor as a primary therapy target of said disease;

selecting a greater flux between the LDL mass transfer flux and the monocyte mass transfer flux so as to result in said greater flux as a primary cause in said disease;

selecting a greater concentration level between the LDL level in serum and the CRP level in

blood plasma so as to result in said greater level as a secondary therapy target of said disease;

determining a relative ratio between currently said total risk and previously said total risk so as to yield said relative ratio as a therapeutic efficacy of said disease;

repeating above-mentioned said methods until said disease risk level is reduced to a normal level for said individual who requires the therapy to prevent or to treat atherosclerosis-related CHD or stroke; and

above-mentioned said methods are written as an executable computer program named the MMA.exe, or another name, to be installed into a general purpose digital computer device to accomplish said methods and to output a result of said methods to a display or a memory or another computer on a network, or to a user.

Claim 2 (currently amended): A method as in claim 1, wherein ~~determining said disease risk yielded by the difference between the measured value and the normal of said LDL concentration parameter~~the nine

disease risks are yielded by the differences between the measured values and the normal values of the nine atherosclerotic parameters, said method comprising the steps of:

a measured value, c_m in mg/dL, of the individual's LDL concentration in human serum is determined using a medical technique for measuring the concentration of blood constituents or said c_m is determined by the physician,

a normal value, c_n in mg/dL, of said LDL concentration is determined by the physician or said c_n = 100 mg/dL for adult,

substituting said c_m and said c_n into the following expression where $c_m \geq c_n$:

$$R_1 = \left(\frac{c_m}{c_n}\right)^{\frac{11}{9}} - 1 \qquad (1)$$

and

calculating (1) yields ~~said~~ the disease risk R_1 caused by ~~said~~ the LDL concentration parameter related to the atherosclerotic risk factors being an elevated LDL concentration in human serum, high-fat diet, hypercholesterolemia or

other risk factors that increase said LDL concentration;

a measured value, c_m in mg/L, of the individual's CRP concentration in human blood plasma is determined using a medical technique for measuring the concentration of blood constituents or said c_m is determined by the physician,

a normal value, c_n in mg/L, of said CRP concentration and an equivalent factor, F, are determined by the physician wherein $F = \left(\frac{D_c}{D_L}\right)^{\frac{16}{27}}$, D_C = the CRP diffusion coefficient and D_L = the LDL diffusion coefficient or said c_n = 1.0 mg/L for adult and said F = 0.66,

substituting said c_m, said c_n and said F into the following expression where $c_m \geq c_n$:

$$R_2 = F\left(\left(\frac{c_m}{c_n}\right)^{\frac{11}{9}} - 1\right) \qquad (2)$$

and

calculating (2) yields the disease risk R_2 caused by the CRP concentration parameter

related to the atherosclerotic risk factors being an elevated CRP level in human blood plasma, systemic inflammation, infectious agents or other risk factors that increase said CRP level;

a measured value, p_m in mmHg, of the individual's blood systolic pressure is determined using a medical technique for measuring the human blood pressure or said p_m is determined by the physician,

a normal value, p_n in mmHg, of said systolic pressure is determined by the physician or said p_n = 120 mmHg for adult,

substituting said p_m and said p_n into the following expression where $p_m \geq p_n$:

$$R_3 = \left(\frac{P_m}{P_n}\right)^{\frac{1}{3}} - 1 \qquad (3)$$

and

calculating (3) yields the disease risk R_3 caused by the systolic pressure parameter related to the atherosclerotic risk factors being an elevated level of blood systolic pressure, family history of hypertension or

other risk factors that increase said systolic pressure;

a measured value, p_m in mmHg, of the individual's blood diastolic pressure is determined using a medical technique for measuring the human blood pressure or said p_m is determined by the physician,

a normal value, p_n in mmHg, of said blood diastolic pressure is determined by the physician or said p_n = 70 mmHg for adult,

substituting said p_m and said p_n into the following expression where $p_m \geq p_n$:

$$R_4 = \left(\frac{P_m}{P_n}\right)^{\frac{1}{3}} - 1 \qquad (4)$$

and

calculating (4) yields the disease risk R_4 caused by the diastolic pressure parameter related to the atherosclerotic risk factors being an elevate level of blood diastolic pressure, family history of hypertension or other risk factors that increase said diastolic pressure;

a measured value, f_m in s^{-1}, of the individual's heart rate is determined using a medical technique for measuring the human heart rate or said f_m is determined by the physician,

a normal value, f_n in s^{-1}, of said heart rate is determined by the physician or said f_n = 72 per minute for adult,

substituting said f_m and said f_n into the following expression where $f_m > f_n$:

$$R_5 = \left(\frac{f_m}{f_n}\right)^{\frac{2}{9}} - 1 \qquad (5)$$

and

calculating (5) yields the disease risk R_5 caused by the heart rate parameter related to the atherosclerotic risk factors being an elevated level of heart rate, smoking cigarette, depression or other risk factors that increase said heart rate;

a measured radius value, a_m in cm, of the individual's arterial vessel at the lesion-prone sites of arterial bifurcations, arterial branching, arterial curvatures or arterial tapering is determined using a medical

technique for measuring the sizes of arterial vessels or said a_m is determined by the physician,

a normal value, a_n in cm, of said arterial radius is determined by the physician or said a_n = a value between 0.2 cm and 2.2 cm for adult,

substituting said a_m and said a_n into the following expression where $a_m \geq a_n$:

$$R_6 = \left(\frac{a_m}{a_n}\right)^{\frac{2}{3}} - 1 \qquad (6)$$

and

calculating (6) yields the disease risk R_6 caused by the arterial radius parameter related to the atherosclerotic risk factors being an increased size of arterial radius at said lesion-prone sites or other risk factors that increase the size of said arterial radius;

a measured temperature value, T_m in °C, of the individual's plasma fluid in the region at said lesion-prone sites is determined using a medical technique for measuring the temperature of human blood plasma or said T_m is determined by the physician,

a normal value, T_n in °C, of said plasma temperature is determined by the physician or said $T_n = 37°C$,

substituting said T_m and said T_n into the following expression where $T_m \geq T_n$:

$$R_7 = \left(\frac{T_m}{T_n}\right)^{\frac{16}{27}} - 1 \qquad (7)$$

and

calculating (7) yields the disease risk R_7 caused by the plasma temperature parameter related to the atherosclerotic risk factors being an elevated temperature of said human blood plasma at said lesion-prone sites, elevated body temperature-related diseases or other risk factors that increase said plasma temperature;

a measured value, α_m in degree, of the angle between gravity and the average velocity of the blood fluid in the region at said lesion-prone sites is determined using a medical technique for measuring the human arterial geometries or said α_m is determined by the physician,

a normal value, α_n in degree, of said angle is

determined by the physician or said α_n = a value between the 10° and 60° for adult,

substituting said α_m and said α_n into the following expression where $\alpha_n \geq \alpha_m$:

$$R_\theta = \left(\frac{\cos\alpha_m}{\cos\alpha_n}\right)^{\frac{2}{9}} - 1 \qquad (8)$$

and

calculating (8) yields the disease risk R_θ caused by the angle parameter related to the atherosclerotic risk factors being a reduced size of said angle or other risk factors that reduce said angle size; and

a measured value, z_m in cm, of the individual's axial length of diffusion flux along the inner arterial wall at said lesion-prone sites is determined using a medical technique for measuring the human arterial geometries or said z_m is determined by the physician,

a normal value, z_n in cm, of said axial length is determined by the physician or said z_n = a value between 0.10 cm and 1.00 cm,

substituting said z_m and said z_n into the

following expression where $z_m \leq z_n$:

$$R_9 = \left(\frac{z_n}{z_m}\right)^{\frac{2}{9}} - 1 \qquad (9)$$

and

calculating (9) yields the disease risk R_9 caused by the diffusion length parameter related to the atherosclerotic risk factors being a decrease in said axial length of the diffusion flux or other risk factors that decrease said diffusion length.

Claim 3-10 (canceled)

Claim 11 (currently amended): ~~A method as in claim 1 having said nine atherosclerotic parameters caused the nine disease risks and~~ The method of claim 2, further comprising: adding said all nine disease risks R_1 to R_9 together so as to yield a total risk of said disease consisting;

a current total risk of said disease related to the currently measured values of said atherosclerotic parameters; and

a previous total risk of said disease related to the previously measured values of said

atherosclerotic parameters.

Claim 12 (currently amended): ~~A method as in claim 1 having said total risk of said disease and~~ The method of claim 11, further comprising: determining a disease risk level containing said total risk of said disease~~, said method~~ comprising ~~the steps of~~:

dividing the disease risk level into the following seven risk sublevels: 0.84 ≥ first disease risk level ≥ 0.00, 1.75 ≥ second disease risk level > 0.84, 2.70 ≥ third disease risk level > 1.75, 3.70 ≥ fourth disease risk level > 2.70, 4.70 ≥ fifth disease risk level > 3.70, 5.80 ≥ sixth disease risk level > 4.70 and seventh disease risk level >5.80; and

selecting a disease risk level containing said total risk of said disease from among seven of said disease risk sublevels.

Claim 13 (currently amended): ~~A method as in claim 1 having said total risk of said disease and~~ The method of claim 11, further comprising: selecting an atherosclerotic risk factor related to

the atherosclerotic parameter having the greatest contribution to said total risk of said disease so as to result in said risk factor as a primary therapy target of said disease.

Claim 14 (currently amended): ~~A method as in claim 1 having said LDL concentration parameter caused the disease risk R_1 and said CRP concentration parameter caused the disease risk R_2 and~~ The method of claim 2, further comprising: selecting ~~said~~ a greater flux between the LDL mass transfer flux and the monocyte mass transfer flux so as to result in said greater flux as a primary cause in said disease ~~, said method~~ comprising ~~the steps of~~:

selecting the LDL mass transfer flux as a primary cause in said disease when said $R_1 \geq$ said R_2; or

selecting the monocyte mass transfer flux as a primary cause in said disease when said $R_1 <$ said R_2.

Claim 15 (currently amended): ~~A method as in claim 1 having said LDL concentration parameter caused the disease risk R_1 and said CRP concentration parameter caused the disease risk R_2 and~~ The method

of claim 2, further comprising: selecting ~~said~~ a greater concentration level between the LDL level in the human serum and the CRP level in the human blood plasma so as to result in said greater level as a secondary therapy target~~, said method~~ comprising ~~the steps of~~:

selecting the LDL level in the serum as a secondary therapy target of said disease when said $R_1 \geq$ said R_2; or

selecting the CRP level in the plasma as a secondary therapy target of said disease when said $R_1 <$ said R_2.

Claim 16 (currently amended): ~~A method as in claim 1 having said current total risk of said disease and said previous total risk of said disease and determining said~~ The method of claim 11, further comprising: determining a relative ratio between said current total risk of said disease and said previous total risk of said disease so as to yield said relative ratio as a therapeutic efficacy of said disease.

Claim 17 (canceled)

Claim 18 (currently amended): A method as in claim 1, wherein ~~all the methods in said all processes in claim 1~~ said method has the steps of:

the step 1 of determining the disease risk R_1 yielded by the difference between the measured value c_m and the normal value c_n of the LDL concentration parameter wherein $c_m \geq c_n$ and $R_1 = \left(\frac{c_m}{c_n}\right)^{\frac{11}{9}} - 1$, determining the disease risk R_2 yielded by the difference between the measured value c_m and the normal value c_n of the CRP concentration parameter wherein $c_m \geq c_n$ and $R_2 = F\left(\left(\frac{c_m}{c_n}\right)^{\frac{11}{9}} - 1\right)$ where $F = \left(\frac{D_c}{D_L}\right)^{\frac{16}{27}}$, D_C = the CRP diffusion coefficient and D_L = the LDL diffusion coefficient, determining the disease risk R_3 yielded by the difference between the measured value p_m and the normal value p_n of the blood systolic pressure parameter wherein $p_m \geq p_n$ and $R_3 = \left(\frac{P_m}{P_n}\right)^{\frac{1}{3}} - 1$, determining the disease risk R_4 yielded by the difference between the measured value p_m and the normal value p_n of the blood diastolic pressure parameter wherein

$p_m \geq p_n$ and $R_4 = \left(\frac{P_m}{P_n}\right)^{\frac{1}{3}} - 1$, determining the disease risk R_5 yielded by the difference between the measured value f_m and the normal value f_n of the heart rate parameter wherein $f_m \geq f_n$ and $R_5 = \left(\frac{f_m}{f_n}\right)^{\frac{2}{9}} - 1$, determining the disease risk R_6 yielded by the difference between the measured value a_m and the normal value a_n of the arterial radius parameter wherein $a_m \geq a_n$ and $R_6 = \left(\frac{a_m}{a_n}\right)^{\frac{2}{3}} - 1$, determining the disease risk R_7 yielded by the difference between the measured value T_m and the normal value T_n of the plasma temperature parameter wherein $T_m \geq T_n$ and $R_7 = \left(\frac{T_m}{T_n}\right)^{\frac{16}{27}} - 1$, determining the disease risk R_8 yielded by the difference between the measured value α_m and the normal value α_n of the angle parameter wherein $\alpha_n \geq \alpha_m$ and $R_8 = \left(\frac{\cos\alpha_m}{\cos\alpha_n}\right)^{\frac{2}{9}} - 1$, and determining the disease risk R_9 yielded by the difference between the measured value z_m and the normal value z_n of the diffusion length parameter wherein $z_n \geq z_m$ and $R_9 = \left(\frac{z_n}{z_m}\right)^{\frac{2}{9}} - 1$;

the step 2 of adding all said nine disease risks R_1 to R_9 in the step 1 together so as to yield a total risk of said disease consisting of a current total risk of said disease related to the currently measured values of the atherosclerotic parameters and a previous total risk of said disease related to the previously measured values of the atherosclerotic parameters;

the step 3 of selecting a disease risk level containing said total risk of said disease in the step 2 from following among seven of the disease risk sublevels: 0.84 ≥ first disease risk level ≥ 0.00, 1.75 ≥ second disease risk level > 0.84, 2.70 ≥ third disease risk level > 1.75, 3.70 ≥ fourth disease risk level > 2.70, 4.70 ≥ fifth disease risk level > 3.70, 5.80 ≥ sixth disease risk level > 4.70 and seventh disease risk level >5.80;

the step 4 of selecting an atherosclerotic risk factor related to an atherosclerotic parameter having the greatest contribution to said total risk of said disease in the step 2 so as to result in said risk factor as a primary therapy

target of said disease;

the step 5 of selecting the LDL mass transfer flux as a primary cause in said disease when said R_1 in the step 1 $\geq$ said R_2 in the step 1 or selecting the monocyte mass transfer flux as a primary cause in said disease when said R_1 < said R_2;

the step 6 of selecting the LDL level in human serum as a secondary therapy target of said disease when said R_1 in the step 1 $\geq$ said R_2 in the step 1 or selecting the CRP level in human blood plasma as a secondary therapy target of said disease when said R_1 < said R_2; and

the step 7 of determining a relative ratio between said current total risk of said disease in the step 2 and said previous total risk of said disease in the step 2 so as to yield said relative ratio as a therapeutic efficacy of said disease; and

wherein said step 1 through said step 7 are written as an executable computer program named the MMA.exe, or another name, to be installed into a general purpose digital computer device

to accomplish said method and to output a result of said method to a display or a memory or another computer on a network, or to a user comprising:

starting the MMA.exe program on said device;

inputting the currently measured values, the previously measured values and the normal values of the individual's atherosclerosis parameters into the input screen of said MMA.exe by using the keyboard of said device;

clicking the "update" button and the "calc. risk" button of said input screen;

clicking the "evaluate" button of the MMA.exe output screen; and

outputting said output screen to a display or a memory or another computer on a network, or to a user by using said computer device so as to produce a result of said methods, called the screening report containing a total risk of said disease, a disease risk level, a primary cause in said disease, a primary therapy target of said disease, a secondary therapy target of

said disease and a therapeutic efficiency, to an individual who requires the diagnosis, the prevention or the treatment of atherosclerosis-related CHD or stroke or other cardiovascular disease.

Claim 19 (new): The method of claim 18, further comprising: repeating said method accomplished by using said device until the individual's disease risk level is reduced to a normal level for said individual who requires the therapy to prevent or to treat atherosclerosis-related CHD or stroke or other cardiovascular disease.